

## REMARKS

Claims 1-12 are pending and rejected and claims 13-34 are canceled. By this Response and Amendment, claims 1 and 5 are amended and claim 35 is newly added.

### 35 U.S.C. §112

Claim 5 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 has been amended to depend from claim 4, thus providing proper antecedent basis for "the oil." Reconsideration and withdrawal of the rejection is respectfully requested.

### 35 U.S.C. §102

Claims 1, 2, 4-7 and 9-12 are rejected under 35 U.S.C. §102(e) as being anticipated by Koethe (U.S. Patent No. 6,360,730).

Claim 1, as amended, is directed to a fuel-conditioning skid for an engine including, in part, an inlet, an outlet, an inlet cleaner in fluid communication with the inlet, a compressor, and a purifier in fluid communication with the inlet cleaner "to chill the flow of fuel to condense out and remove at least a portion of the remaining undesirable compounds from the flow of fuel." The claimed apparatus is capable of removing a substantial portion of the undesirable compounds from a stream of fuel to produce a stream of fuel to an engine. *See* Page 22, line 22 – page 23, line 7. This can reduce short-term and long-term damage to engine components including, for example, microturbine fuel systems, combustors and downstream flow path components. *See* Page 8, lines 14-23.

Koethe, in contrast, is directed to a method of injecting an inerting agent into jet fuel while it is being loaded onboard an aircraft to make aircraft fuel tanks safe from ignition and explosion. Koethe also discloses that the inerting agent can be injected into aircraft fuels which are cooled to reduced temperatures such that the volume of the fuel is reduced, thereby allowing more fuel to be held in storage. *See* Abstract. The inert loading jet fuel system is a ground based hydrant system, or truck, trailer or skid mounted. *See* Col. 3, lines 36-40.

The claimed fuel-conditioning skid includes an inlet connectable to a source to receive a flow of gaseous fuel, and provides a flow of fuel in which at least a portion of undesirable compounds have been removed at an outlet that is connectable to an engine. Koethe fails to

teach or suggest a device including a fuel outlet that is connectable to an engine. Rather, the Koethe device is carried on a truck or other ground unit for processing liquid jet fuel prior to delivering the fuel to an aircraft storage tank. Connecting the Koethe device to an engine would negate the purpose of the Koethe device, which is to reduce the volume of fuel and render the fuel safe for storage in tanks. Furthermore, the inerting agent must be separated from the fuel while in the storage tanks before the fuel is used by the aircraft. *See* Col. 3, lines 50-58. Connecting the Koethe device directly to the aircraft engine would deliver inerted fuel to the aircraft engine.

The claimed fuel conditioning skid also includes a purifier in fluid communication with the inlet cleaner "to chill the flow of fuel to condense out and remove at least a portion of the remaining undesirable compounds from the flow of fuel." Koethe, in contrast, is directed to conditioning liquid fuels, such that the fuel is already condensed. Chilling the liquid fuel does not cause undesirable compounds to condense out. Rather, Koethe relies on a water separation unit having a coalescing filter/absorption media to remove undesirable compounds in a separate stage from chilling. *See* Col. 8, lines 11-14. The liquid fuel is chilled to only to reduce the volume of the fuel for storage in jet fuel tanks. *See* Col. 5, lines 24-26. Thus, there is no suggestion of a purifier to chill the flow of fuel to condense out and remove at least a portion of the remaining undesirable compounds from the flow of fuel as is required by claim 1.

Therefore, Koethe fails to teach or suggest all of the elements of independent claim 1, and in fact teaches away from claim 1. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 2, 4-7 and 9-12 depend from claim 1 and are allowable for at least the same reasons. Reconsideration and withdrawal of the rejection is respectfully requested.

### **35 U.S.C. §103**

Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Koethe in view of Provost (U.S. Patent No. 5,722,229). Provost is directed to a gas turbine engine having a load compressor, a combustor for burning fuel in air supplied by the load compressor, a turbine driven by combustion products of the combustor, and a variable speed drive means for transferring power from the turbine to drive the load compressor. *See* Col. 2, lines. 30-41. Claim 8 is rejected under 35 U.S.C. §103(a) as being unpatentable over Koethe in view of Seagle (U.S.

Patent No. 6,019,817). Seagle is directed to a filter structure including a carbon filtering media. *See* Col. 3, lines 45-47. Claims 3 and 8 depend from independent claim 1. Koethe is deficient with respect to the elements of claim 1 as previously discussed. Neither Provost nor Seagle, alone or in combination with Koethe, remedies this deficiency. Therefore, reconsideration and withdrawal of the rejections is respectfully requested.

### **New Claim**

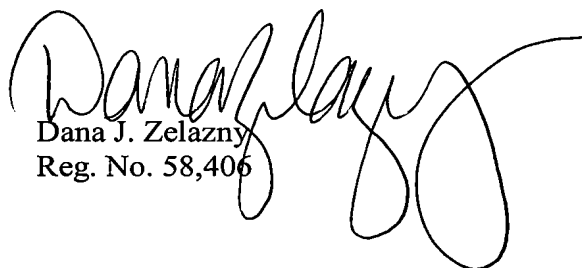
Newly added independent claim 35 is directed to a fuel-conditioning skid for an engine including, in part, an inlet, an outlet, an inlet cleaner in fluid communication with the inlet, a compressor, a purifier in fluid communication with the inlet cleaner to chill the flow of fuel to condense out and remove at least a portion of the remaining undesirable compounds from the flow of fuel and a heat exchanger to warm the flow of chilled fuel. The claimed apparatus is capable of removing a substantial portion of the undesirable compounds from a stream of fuel to an engine. *See* Page 22, line 22 – page 23, line 7. This can reduce short-term and long-term damage to engine components including, for example, microturbine fuel systems, combustors and downstream flow path components. *See* Page 8, lines 14-23.

Koethe intentionally chills the liquid jet fuel to a lower temperature to reduce fuel volume. This permits increased storage of fuel to be loaded onto an aircraft. *See* Col. 6, lines 42-52. However, Koethe does not disclose a heat exchanger for warming the flow of chilled fuel as is recited in claim 35. This is an important step in the current invention, as this warming of the gaseous fuel can elevate the fuel temperature above the dew point. This ensures that any small reductions in the temperature of the flow of fuel downstream will not cause condensation of liquids. *See* Page 16, lines 4-9. This is anathema to the Koethe device, as warming the chilled fuel would expand the fuel volume and reduce the aircraft fuel storage.

### CONCLUSION

No fee is believed to be necessary for entry of this Response and Amendment, which is respectfully requested. The Examiner is invited to contact the undersigned with any questions.

Respectfully submitted,



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